

Information Security

Course Information

Lecturer: Nguyễn Thị Thanh Vân – FIT - HCMUTE

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Information

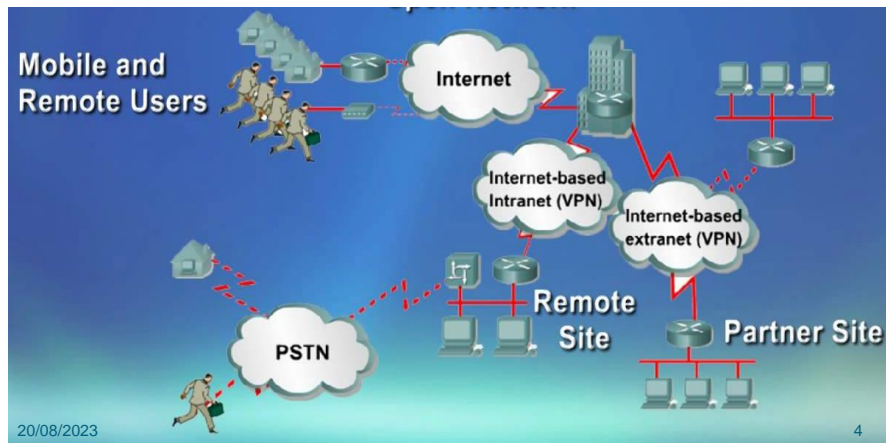


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Open network

- Today's network architecture is complex and open.
- Moving towards a more robust, agile and secure Internet



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Connecting everything

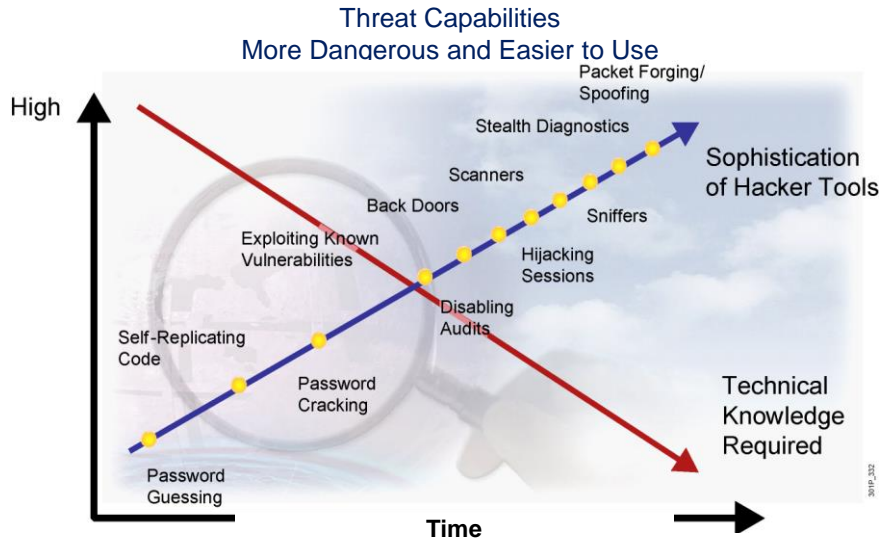


The challenges

∞ The challenges in an increasingly interconnected environment,



Security threats



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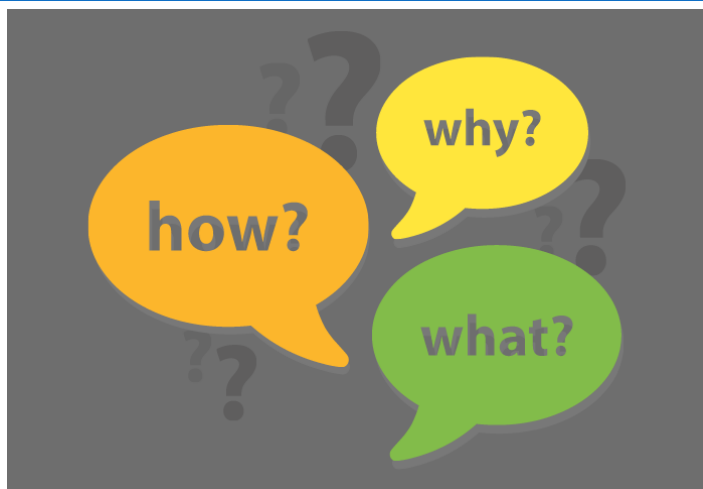
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Course Description

- ✎ The course provides students with basic knowledge of Computer Information Security such as:
 - CIA information security standards,
 - security issues on software, operating systems, databases and computer networks
 - problems with information encryption, Hash, MAC, RSA, DES, AES algorithms, and key management in network transmission protocols.
- ✎ In addition, the course also mentions the risks of malicious code and network security solutions such as Firewall, IDS/IPS.

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Course Overview

- ✎ The basic concepts, principles, and fundamental approaches to secure computers and networks.
- ✎ Its main topics include:
 - Information Security Introduction. [Computer Security Concepts](#)
 - Cryptography Introduction (basic)
 - Software security
 - Operating systems security
 - Authentication – Access control
 - Cryptography algorithms: symmetric, asymmetric.
 - Malware
 - Web security
 - Data Security
 - Network threats and defenses
- ✎ Detailed syllabus: [>>](#)

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Lessons

1	Introduction to Information Security and Computer Security Concepts
2	Software Security
3	Operating Systems Security
4	Authentication
5	Access Control
6	Mandatory Access Control
7	Database Security
8	Malicious Code
9	Firewalls & Intrusion Detection
10	Introduction to Cryptography
11	Symmetric Encryption
12	Public-Key Cryptography
13	Security Protocols
14	Web Security
15	Cyber Security

slides: <https://utex.hcmute.edu.vn/course/view.php?id=37220>

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Requirements

- 🔗 Operating systems
 - Windows
 - Linux: Ubuntu/CentOS, **Kali** Linux
- 🔗 Networks
- 🔗 Virtual Environment
 - VMW, PCVirtual...
- 🔗 Prior programming experience with C or Java is recommended.

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References

Utex:

- [1] Computer Security Principles and Practice -Pearson, William Stallings, Lawrie Brown, □2014
- [2] Principles of Information security - Course Technology Michael E Whitman_ Herbert J Mattord, □2012
- [3] Applied Information Security A Hands-on Approach David Basin, Patrick Schaller, Michael Schläpfer auth, □2011
- [4] CISSP_ Certified Information Systems Security Professional Study Guide -John Wiley & Sons, □2011



2011 Principles of Information Security -Course Technology Michael E. Whitman, Herbert J. Mattord-.pdf

2014 Computer Security Principles and Practice-Pearson, William Stallings, Lawrie Brown-.pdf

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Methods

Lecture

Discuss

Exercise

LAB:

- Individuality
- Group

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Assessment

☞ Midterm: 50%

- Exercise & Quiz
- Test
- LAB

☞ Final exam: 50%

- Test

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Contact

☞ vanntth@hcmute.edu.vn

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